

FABRICATING BIOPOLYMER ARRAYS

ABSTRACT

A method and apparatus for fabricating an array of biopolymers on a substrate using a biopolymer or biomonomer fluid, and using a dispensing head. The head has a reservoir chamber and at least one jet which can dispense droplets onto a substrate. The jet includes a capillary delivery chamber communicating with the reservoir chamber, which delivery chamber has an orifice. The jet further includes an ejector which, when activated, causes a droplet to be ejected from the orifice. The method includes loading the head by positioning the head with the orifice adjacent and facing a biomonomer or biopolymer fluid, and providing a load pressure to the reservoir chamber. The load pressure is sufficiently negative such that the fluid is drawn into the reservoir chamber through the orifice and delivery chamber, while simultaneously being insufficient to result in ambient atmosphere entering the delivery chamber through the orifice once the head has been loaded and no further fluid is facing and adjacent the orifice. The head is positioned with the orifice facing the substrate and multiple droplets are dispensed from the head orifice so as to form an array of droplets on the substrate.